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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/732,350	12/07/2000	Allan Svendsen	5200.220-US	1715
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25908 7590 01/24/2003

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EXAMINER

KERR, KATHLEEN M

ART UNIT	PAPER NUMBER
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1652

DATE MAILED: 01/24/2003

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/732,350

Applicant(s)

SVENDSEN ET AL.

Examiner

Kathleen M Kerr

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 07 November 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 32-63 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 32-63 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Application Status

1. In response to the previous Office action, a first Office action on the merits (Paper No. 7, mailed on May 7, 2002), Applicants filed an amendment and response received on November 7, 2002 (Paper No. 8). Said amendment cancelled claims 11-18 and added new claims 32-63. Thus, Claims 32-63 are pending in the instant Office action and will be examined herein.

Priority

2. As previously noted, the instant application is granted the benefit of priority for U.S. non-Provisional Application Nos. 09/036,260 (USPN 6,184,015) filed on September 15, 1999 and 09/032,315 (USPN 5,985,818) filed on February 27, 1998 as well as the foreign application 0222/97 filed in Denmark on February 28, 1997 as requested in the declaration.

Maintained - Objections to the Specification

3. Previous objection to the Abstract for not completely describing the disclosed subject matter is maintained. Applicants argue that the Abstract, as filed, is complete and fully complies with 37 C.F.R. § 1.72. The Examiner disagrees. Presently, no species of the modified laccases are disclosed. These species are crucial the understanding of the scope of the disclosure. Appropriate correction is required. The Examiner suggests the inclusion of the species of laccases disclosed in the specification – namely, *Myceliophthora thermophila*, *Polyporus pinsitus*, and *Coprinus cinereus*.

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4. Previous objection to the Title for not completely describing the claimed subject matter is maintained. Applicants argue that the Title, as filed, is complete and fully complies with 37 C.F.R. § 1.72. The Examiner disagrees. The pending claims are drawn to *Myceliophthora thermophila* laccase mutants, not more general laccase mutants. The previously suggested title is appropriate. Correction is required.

Withdrawn - Claim Rejections - 35 U.S.C. § 112

5. Previous rejection of Claims 15-18 under 35 U.S.C. § 112, second paragraph, as being indefinite for the phrase “corresponding to” is withdrawn by virtue of Applicants’ cancellation of said claims. Moreover, the newly pending claims do not contain this phrase.

6. Previous rejection of Claims 15-18 under 35 U.S.C. § 112, second paragraph, as being indefinite for the terms “increased” and “altered” is withdrawn by virtue of Applicants’ cancellation of said claims. Moreover, the newly pending claims do not contain this phrase.

7. Previous rejection of Claims 16 and 17 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for the unclear reference to variants having “**a** mutation” (emphasis added) in positions corresponding to **ranges** is withdrawn by virtue of Applicants’ cancellation of said claims. Moreover, the newly pending claims do not contain this phrase.

8. Previous rejection of Claim 17 under 35 U.S.C. § 112, second paragraph, as being indefinite for the term “mediator efficiency” is withdrawn by virtue of Applicants’ cancellation of said claims. Moreover, the newly pending claims do not contain this phrase.

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9. Previous rejection of Claim 18 under 35 U.S.C. § 112, second paragraph, as being indefinite for the term “O₂/OH⁻-pathway” is withdrawn by virtue of Applicants’ cancellation of said claims. Moreover, the newly pending claims do not contain this phrase.

10. Previous rejection of Claims 15-18 under 35 U.S.C. § 112, first paragraph, written description, is withdrawn by virtue of Applicants’ cancellation of said claims. Moreover, the newly added claims do not contain any ambiguous language that leads to a new written description rejection since all the laccase variants are claimed according to exact structure (sequence).

Withdrawn - Claim Rejections - 35 U.S.C. § 102

11. Previous rejection of Claims 15-17 under 35 U.S.C. § 102(b) as being anticipated by Germann *et al.* is withdrawn by virtue of Applicants’ cancellation of said claims. Moreover, the instant art is not applied to the newly added claims because Applicants’ intent, by virtue of their argue, is to claim SEQ ID NO:10 except with more of more of the noted mutations. SEQ ID NO:10 is a *Myceliophthora thermophila* laccase while Germann *et al.* teach a *Neurospora crassa* laccase.

12. Previous rejection of Claims 15-17 under 35 U.S.C. § 102(e) as being anticipated by Feng *et al.* is withdrawn by virtue of Applicants’ cancellation of said claims. Moreover, the instant art is not applied to the newly added claims because Applicants omitted the mutated regions anticipated by Feng *et al.* in the Markush groups.

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13. Previous rejection of Claim 16 under 35 U.S.C. § 102(e) as being anticipated by Aaslyng *et al.* is withdrawn by virtue of Applicants' cancellation of said claims. Moreover, the instant art is not applied to the newly added claims because Applicants omitted the L513V mutant anticipated by Aaslyng *et al.* in the Markush groups.

14. Previous rejection of Claims 16-18 under 35 U.S.C. § 102(e) as being anticipated by Pedersen *et al.* is withdrawn by virtue of Applicants' cancellation of said claims. Moreover, the instant art is not applied to the newly added claims because Applicants omitted the mutated positions anticipated by Pedersen *et al.* in the Markush group.

Maintained - Double Patenting

15. Previous rejection of Claims 15-17 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-3, respectively, of U.S. Patent No. 5,985,818 in view of Yaver *et al.* (USPN 6,008,029) is withdrawn by virtue of Applicants' cancellation of said claims. However, this rejection is set forth against new claims 32-63 for the reasons previously cited. Applicants argue that a terminal disclaimer will be filed upon indication of allowable subject matter; no disclaimer has yet been received.

NEW REJECTIONS

Claim Objections

16. Claims 32-63 are objected to for the improper Markush grouping. For example, in Claim 32, the line "D106A, F, I, L, P, V, W, Y" is intended to be equal partners of the Markush group

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yet each are separated by commas while other members of the Markush group are separated by semicolons. The Examiner suggests the following:

--- D106A; D106F; D106I; D106L; D106P; D106V; D106W; D106Y;---

for appropriate itemization of the Markush group. Also, the Examiner notes that in dependent claims, like Claim 35, the Markush group should be as follows:

--- D106A; D106F; D106I; D106L; D106P; D106V; D106W; or D106Y;---(emphasis added)

Claim Rejections - 35 U.S.C. § 112

The following is a quotation of the second paragraph of 35 U.S.C. § 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

17. Claims 32-63 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The phrase “having an amino acid sequence of SEQ ID NO:10” is unclear as to whether this sequence describes the variant or the laccase. By virtue of Applicant’s arguments of the prior art cited previously, Applicants’ intent seems to be to claim SEQ ID NO:10 with substitutions as cited in each claim. The Examiner suggests the following claim language:

---A variant of a laccase, wherein said variant has laccase activity and has the amino acid sequence of SEQ ID NO:10 except for one or more of the following mutations:...---

Summary of Pending Issues

18. The following is a summary of the issues pending in the instant application:
- a) The title stands objected to for being incomplete.
 - b) The Abstract stands objected to for being incomplete.
 - c) Claims 32-63 stand objected to for the Markush grouping punctuation.
 - d) Claims 32-63 stand rejected under 35 U.S.C. § 112, second paragraph, for unclear language.
 - e) Claims 32-63 stand rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over U.S. Patent No. 5,985,818 in view of Yaver *et al.* (USPN 6,008,029).

Allowable Subject Matter

19. The Examiner notes that clear claims, amended as suggested herein, would be allowable with the submission of a terminal disclaimer as offered by Applicants. Amendment to the title and the abstract are also required for allowance.

Conclusion

20. Claims 32-63 are rejected for the reasons identified in the numbered sections of this Office action. Applicants must respond to the objections/rejections in each of the numbered sections in this Office action to be fully responsive in prosecution.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See M.P.E.P. § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 C.F.R. § 1.136(a).


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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 C.F.R. § 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kathleen M Kerr whose telephone number is (703) 305-1229. The examiner can normally be reached on Monday through Friday, from 8:30am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ponnathupura Achutamurthy can be reached on (703) 308-3804. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9307 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0196.


PONNATHUPURA ACHUTAMURTHY
SUPERVISORY PATENT EXAMINER
TECHNICAL CENTER 1300

KMK
January 16, 2003